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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/058,863 | 01/28/2002 | Scott R. Brown | ATA-5 | 3628 |

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| EXAMINER | |
|---|---|
| DEBERADINIS, ROBERT L | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2836 | |

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/058,863 | BROWN ET AL. | |
| | Examiner | Art Unit | |
| | Robert DeBeradinis | 2836 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *11/12/0-4*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *WO 95/29498 REFERENCE*.

## DETAILED ACTION

The reply filed 11/12/04 consists of addition of new claims 21-24 and remarks related to rejection of claims. The claims are not allowable for the following reasoning.

### *Response to Arguments*

Applicant's arguments, see pages 6, 7, filed 11/12/04, with respect to the rejection(s)of claim(s) 1-15 under BROWN have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of BROWN 6,825,435 and GIANNOPOULOS 6,400,127.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over BROWN 6,825,435 in view of GIANNOPOULOS 6,400,127.

Regarding claims 1, 2.

BROWN discloses;

a controller (5) for monitoring a component of DC power, evaluating said monitored component and providing an output signal in response to said evaluation of said monitored component;

an output switch operating in response to said output signal for selectively providing said DC power at a constant average current to an electrical device connected electrically in series with said DC power and said output switch (8).

BROWN does not disclose;

a full-wave bridge providing a rectified DC power output,

a micro-controller for monitoring a component of said rectified DC power.

GIANNOPOULOS discloses a dual mode pulse-width modulator for power control applications comprising;

a full-wave bridge (612) providing a rectified DC power output,

a micro-controller (202) for monitoring and controlling DC power output (Vo).

It would have been obvious to one having ordinary skill in the art at the time of this invention to have modified the power supply and control equipment disclosed by BROWN to have a full wave bridge and a microprocessor. The motivation would be to rectify an ac source to provide the required DC source, eliminating the need to replace a battery and the micro-controller (processor) providing control flexibility for accommodating different supply voltage requirements.

Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over BROWN 6,825,435 in view of GIANNOPOULOS 6,400,127 in further view of GARCES 5,450,306.

Regarding claims 3-6

BROWN in view of GIANNOPOULOS discloses the circuit of claim 1.

BROWN in view of GIANNOPOULOS does not disclose wherein said monitored component is evaluated with respect to a set point measured in volt-seconds.

GRARCES discloses a closed loop pulse width modulator inverter with volt-seconds feedback control (abstract).

It would have been obvious to one having ordinary skill in the art at the time of this invention to evaluate the monitored component with respect to a set point measured in volt-seconds. The motivation would be to regulate the output AC voltage of the output switch (8).

Claims 7-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over BROWN 6,825,435 in view of GIANNOPOULOS 6,400,127 in further view of GARCES 5,450,306 in further view of PERREIRA WO 95/29498.

Regarding claims 7-24.

BROWN in view of GIANNOPOULOS in further view of GARCES disclose a full-wave bridge rectifier providing a rectified DC power output; a micro- controller for monitoring a component of said rectified DC power at evenly spaced intervals, evaluating said monitored component with respect to a set point and providing an output signal in response to said evaluation of said monitored component; an output switch operating in response to said output signal for selectively providing said rectified DC power at a constant average current to an electrical device connected electrically in series with said full-wave bridge rectifier and said output switch.

BROWN in view of GIANNOPOULOS in further view of GARCES does not teach a sag compensator circuit.

PERREIRA discloses a DC actuator control circuit with voltage source sag compensation.

It would have been obvious to one having ordinary skill in the art at the time of this invention to provide an open loop voltage sag compensator circuit. The motivation would be to supply a controlled voltage to drive an inductive load.

Any inquiry concerning this communication should be directed to Robert L. DeBeradinis whose number is (571) 272-2049. The Examiner can normally be reached Monday-Friday from 8:30 am to 5:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Brian Sircus, can be reached on (571) 272-2058. The Fax phone number for this Group is (703) 872-9306.

RLD

FEBRUARY 4, 2005

ROBERT L. DEBERADINIS
PRIMARY EXAMINER